## BUILDERS MAGAZINE

**BM NOVEMBER DECEMBER 2022** 

# SAMAR CONSTRUCTION COMPANY









**EMAIL**:

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MOMBASA BRANCH OFFICE Tom Mboya Avenue, Tudor, P. O. Box 42490-80100, Mombasa, Kenya.

## Konza National Data Center and Smart City



Konza National Data Center - under construction

Konza National Data Center and Smart City facilities project is being implemented by the

Ministry of ICT through Konza Technopolis Development Authority (KoTDA). The project is



Konza smart city

being executed as a priority for Phase I of Konza Technopolis implementation that will ensure that Konza is able to carry out the core functions of a smart city. In addition, it will be a key enabler towards Kenya's digital economy and is modelled to support data, voice, video, services, systems and applications. The main components of this project are:

The design and construction of Tier III Konza National Data Center.

Design and construction of a Disaster Recovery Data Center

design and implementation of backbone optical fibre network and fibre routing for Konza Phase 1. This will comprise optical fibre and 3Optical Line Termination (OLT) sites. It will encompass providing access to each building of Konza Phase 1.

Provision of Wi-Fi access points to be positioned on streetlights and buildings to support implementation of smart city services

Design and implementation of Konza Phase 1 Smart City services and facilities



Konza will be a smart city, with an integrated urban information and communication technology (ICT) network that supports delivery of connected urban services and allows for efficient management of those services on a large scale. Specifically, a smart city framework will integrate the following four key city services:

Infrastructure services (transportation, utilities, public safety, environment)
Citizen services (access and participation)
City services (city information, planning and

Business services (supportive services for local

development)

commerce)

As a smart city, Konza will gather data from smart devices and sensors embedded in the urban environment, such as roadways, buildings, and other assets. Collected data will be shared via a smart communications system and be analyzed by software that delivers valuable information and digitally enhanced services to Konza's population. For example, roadway sensors will be able to monitor pedestrian and automobile traffic, and adjust traffic light timing accordingly to optimize traffic flows.

Konza's population will also have direct access to



collected data, which may include traffic maps, emergency warnings, and detailed information describing energy and water consumption. The availability of data will enable Konza's population to participate directly in the operations of the city, practice more sustainable living patterns, and enhance overall inclusiveness.

By leveraging the smart city framework, Konza will be able to optimize its city services, creating a sustainable city that responds directly to the needs of its residents, workers, and visitors.

The implementation of a smart city framework at Konza has begun with detailed planning relating to

ICT infrastructure. As Konza continues to develop its technology network, it will draw from a range of international best practices, including the Intelligent Community Forum, Smart Cities Council, and International Standards Organization's methodologies for the sustainable development of communities. Konza will learn from global cities that have successfully incorporated smart city frameworks, including Santander, Spain; Barcelona, Spain; Singapore; Amsterdam, The Netherlands; and Rio de Janeiro, Brazil.

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### **KENYA OFFICE**

**Tel:** 0794513375 **P.O Box** 2014-20116 Gilgil

Email: info@buildersmagazine.co.ke Website: www.buildersmagazine.co.ke

### Contributions

The editors welcome news items, press releases, articles and photographs relating to the Construction Industry. These will be considered and, if accepted, published. No responsibility will be accepted should contributions be lost, damaged or incorrectly printed.

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## DHANYA CONSTRUCTION KENYA LIMITED COMPANY PROFILE



## Dhanya Construction Kenya Limited

### **BUILDING AND CIVIL ENGINEERING CONTRACTORS**

**Company History** 

Dhanya Construction Kenya Limited is a Civil Engineering and Building Construction firm undertaking projects generally in Nairobi.

The company was founded in 2015 by Mr. Hiralal Vaghani and Kanta Vaghani

The partners are very experienced members of the construction industry having been in the industry for an accumulated period of over 30 years and having engaged in numerous structures in Nairobi.

The Young Dhanya Construction Kenya limited is currently undertaking both building and civil works as Main Contractors for small sized projects.

Company mission

To be among the best construction companies both in Kenya and in East and Central Africa.

The Company's mission is to provide quality projects to our esteemed clients at the most competitive costs and reasonable completion time

frames, while encompassing the latest technologies being evolved worldwide.

Company Values

Dhanya Construction has achieved success and fame from our commitment to our clients which has been brought about by strict adherence to our values, namely:

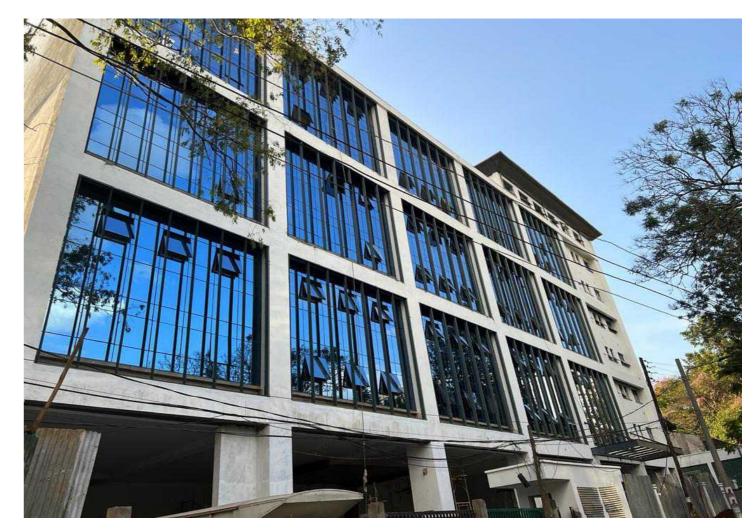
Positive Leadership Integrity Honesty Fairness Reliability

**Company Registration** 

Business No: CPR/2015/200517
Pin No: P051557414E
Tax Compliance: KRAON951569208
NCA Registration: 259/B/0214

P.O. Box 11752 - 00400

1st Parklands - Swamibapa Road



Thakkar Office Block-Westland's

Workmanship Quality Control

Dhanya Construction demands for very highquality workmanship from all its workers and sub-contractors. A continuous process of quality control is undertaken at various stages with a lot of emphasis on the same.

**Our Customers** 

Dhanya Construction has undertaken projects for several customers with some of the most recognizable companies and institutions in East Africa, working with customers in the Capital City of Kenya - Nairobi, to the coasts of East Africa in Mombasa and at many other locations.

**Our Services** 

GENERAL CONSTRUCTION
BUILDING PLUMBING ELECTRICAL TILING

With over 30 years of experience, Dhanya

Construction Ltd has completed several residential and commercial building projects with a customer satisfaction rate of over 90%. The projects are completed with the finest materials and technologies, at a competitive cost and within resonable time frames. Equipped with specialed teams with electrical and plumbing, we are able to over more solutions and in a more timely fashion to uniquely suit your requirements.

HOME INTERIORS
WALL FINISHES|TILING | PARQUE FLOORING



Overing diVerent finishes for all kinds of

environment, be it hot environment or cold, quality of your walls will not be comprised for a very long time. Our wall profiles come in diVerent materials, and finishes to suit your architectural space. Finishes are customised to meet the unique preference of clients, whether it is modern prints and textures or traditional wood and stone.

#### **ROOFING**



Commercial and Residential Fit outs



**OFFICE FITOUTS** 

DESKS | STORAGE | INTERIORS

A workplace is a living and breathing environment, where you and your state are the assets that are the life source of your company. We manage projects with different scale and complexity, whether it be space recreation or relocation or total reconfiguration.



6

### ROOFING | TERRACING | WATER PROOFING

Roofs designed to put up more resistance to weather and hard wearing, inhibiting weather resistance properties. They are layered to guarantee waterproofing traits therefore preventing damage from acts of nature. Our roofs are cost effective, sustainable with water harvesting properties, wind resistant and most importantly customized to the unique preference of our customer.



RESIDENTIAL FITOUTS

KITCHENS | WARDROBES | VANITIES

We have a close working relationship with the client and understand that refurbishing your home is going to a stressful event. With careful planning and project management to ensure minimal disturbance.

We pride ourselves on creating unique residential fitouts and can build a beautiful yet practical space that will suit your individual needs.

Chandarana Supermarkets limited
Dhanya Construction has been in close
partnership with the Multi Store outlet
Chandarana and has been contracted to complete
most of their offices and retail stores over Kenya
including Mombasa and Eldoret.

### **Our Projects**

Dhanya Construction is one of East Africa's leading home restorations & renovations expert for over 30 years. We specialise in design and construction and are able to provide total makeovers for all types of residential and commercial projects. We



**HEALTH AND SAFETY** 

The existing Government policy document is an integral part of the management system for occupational safety and welfare and details the mandatory requirents to be applied throughout the company. We strictly adhere to these requirements.

The promotion of health and safety is a shared objective of the company and its employees at all levels.

To that aim, the company has assessed the significant health, safety and environmental hazards from its business operations and has put suitable arrangements to control them to mitigate any risk to health and safety of its employees and others likely to be affected by its activities.

are master builders and are proud of our reputation for high standards of workmanship, creative design and value for money.



It is the policy of the company so far as is reasonably practicable to:

- Maintain a management system approach to occupational health and safety in accordance with the requirement of BSOHSAS 18001:2007
- -Provide and maintain machinery, plants, facilities, equipment and systems of work that are safe and with out risks to health.
- -Ensure safety and the absence of risks to health in connection with the use, control, handling, storage and transport of materials and substances.
- Provide training, instruction, guidance and advice to ensure the competence of employees and ensure that allocated tasks are within their skills, knowledge and ability to perform safely.



P.O. Box - 11752 - 00400 Parklands, Nairobi - Kenya



hiralalvaghani@gmail.com info@dhanya.co.ke



0727 800 02



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\*CONSTRUCTION DESIGN AND BUILD \*INTERIOR FITOUTS

\*GENERAL CONSTRUCTION HOME AND OFFICE INTERIORS FIT-OUTS

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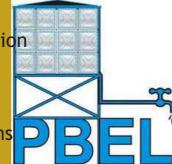


We are proud to be associated with Danya Construction K Ltd

Our services

Plumbing Drainage Fire fighting System installation solar heating Systems Ventilations systems Regular Service maintenance.

Sanitary ware Installation Gas Installation Sprinkler systems Air conditioning **Steel Tanks Fabrications** 







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Power and Lighting

• Fire Alarms Systems AVR & Surge Protection

Data/Telephone Cabling

LV Switchgear and Standby

### Specialist in:

- Commercial Developments
- Industrial Developments
- Warehouses and Business parks
- Hospitals and Clinics
- Apartment Blocks
- Residential estates
- **Educational Institutes**
- Hotels, Restaurants and Lodges



13- Office Suits, P O Box - 39130 - 00623. Parklands, Nairobi, Kenya. +254 772 762 743 +254 738 948 707 info@rpskenya.co.ke

## URBANWOOD SUITES APARTMENTS



Artistically derived from its geological location, Urbanwoods Suites is located at the heart of Nairobi county in wood avenue Kilimani with its developer as Blue Urban Limited. Kilimani which is a prime residential and commercial area approximately 7 Kms West of Nairobi CBD. The





area prides in its rich mix of culture with a population consisting of individuals from diverse social backgrounds. It is a 17 storey mixed use development high-rise structure hosting commercial and retail spaces on the first six floors and 3 typologies of serviced apartments on the rest of the floors save for 16th and 17th floors which is characterized by amenities such as rooftop restaurant, massage palour, steam bath, sauna, gym and laundry room on the 17th floor.

Residents in Kilimani are of both local and foreign descents and the area is home to a host of international schools such as the French, Japanese and Swedish Language Schools.

This development will harbor unique blend of modern serviced apartments, retail outlets, commercial units, office spaces and recreational amenities offering a one stop shop for goods and services while being accentuated by proximity to major shopping centers like Yaya Centre, Prestige Plaza, Hurlingham and Adams Arcade.

Some of the target market includes:

- Financial institutions
- Outpatient health services
- Supermarkets
- Antique shops
- Private offices, serviced office suites
- A Man's Parlor, a spa, with and executive barbershop with a Steam bath
- Mobile Money Transfer Retail Boutique with Assorted Cashless money Transfer shop
- Health food store / Supplements
- Pet Supply Store Aqua and other assorted pets food stuffs
- Beauty Shop
- A woman's stop shop
- ECommerce Drop Off Store
- Fast food outlets
- Gadget Accessory Store, phones & Accessories
- Retail Pharmacy

### **MANDATED AGENTS: SUNLAND REAL ESTATES LIMITED**

CATEGORY	PARTICULARS	DETAILS	BUILT UP AREA		
17 <sup>™</sup> FLOOR	Amenity area	Gym and laundry room.	10,020 sqft		
16 <sup>™</sup> FLOOR	Amenity area	Members' club, massage parlor, steam bath and sauna and swimming pool.	Rooftop restaurant Massage parlor Steam bath and	2225 sqft 930sqft 1,400sqft	
			Sauna		
15 <sup>™</sup> FLOOR	Residential area	2no 2 bedroom and 3no 1 bedroom serviced apartments	810 sqft 1 br deluxe	<ol> <li>No. per floor</li> <li>No. per floor</li> </ol>	
			1,460 sqft	2. No. per floor	
7 <sup>™</sup> - 14 <sup>™</sup> FLOOR	Residential area	7no 1 bedroom (Standard and Deluxe)	810sqft/unit	No. per floor	
		serviced apartments per floor	Deluxe 2 940sqft/unit	2 No. per floor	
6 <sup>™</sup> FLOOR	Commercial space	Conference rooms Reception to residential and main management office	2,160sqft 1,100 sqft		
		Serviced offices,	1,675 sqft		
2 <sup>ND</sup> - 5 <sup>TH</sup> FLOOR	Commercial space	Leasable office spaces	5,165 sqft per floor		
FIRST FLOOR	COMMERCIAL AREA 6530 sqft	Restaurant and executive Restaurant: 5700 sqft Barber shop: 830sqft	iive barber shop		
GROUND FLOOR	COMMERCIAL SPACE 1,550 sqft lettable area	Commercial space and management/security office, guard houses, generator room and services	4 parking spaces 1,550sqft of lettable commercial space.		
BASEMENT 2	PARKING AREA	22 No. Parking Spaces			
BASEMENT 1		18. Nos Parking Spaces			

#### Economic sense

As a business entity, you can be assured of high return on investment owing to the support this development offers to local businesses due to increase in foot traffic and its proximity and convenience to new clientele.

It has the power to attract a lot of interest and foot traffic compared to stand-alone stores, strip malls, or shopping centers.

12

The objective of this development is to transform the neighborhood and bring residents and visitors to one location to live, work, eat, shop and play.

Restaurants and shops will thrive well owing to the shared community spaces which are incorporated to encourage people to get outside and mingle.

The key pull factors for this development is



derived from the fact that the area continues to grow and expand with myriad of investments opportunities with the following pull factors:

1. Proximity to Nairobi CBD: Kilimani is only 10 minutes away from Nairobi CBD making it a convenient residential location for individuals working in town.

- 2. Good transport network: The area is served by a host of well paved roads, such as the Argwings Kodhek road, Denis Pritt road, Lenana Road, Chaka road and Ngong roads that makes travelling convenient.
- 3. Growing middle class: An influx of higher middle income earners in the area has increased the demand for residential as well as commercial developments.
- 4. Security: Security in Kilimani is quite good and residents enjoy services offered by the Kilimani Police Station which is located at the heart of Kilimani.
- 5. Zoning: Kilimani Area was predominantly a low density residential area but has been rezoned to accommodate high-rise and high density residential and commercial uses.

This well thought out development mix would serve to maximize overall returns and given the current development trends, its excellent architectural designs would be the ultimate pull factor in the region.



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High performance

## Lasting **Strength** with fibre cement

Everite Building Products has over the years established a reputation for producing a variety of outstanding quality products which have been used in a wide range of external and internal

Nutec is the registered name for products manufactured without asbestos as a raw material. Nutec fibre cement product are manufactured using a mixture of cellulose fibre, cement, silica and water.

Everite is renowned for its comprehensive range of Nutec Roofing and Cladding Solutions and includes fibre-cement roofing, cladding, ceilings and building columns amongst others.

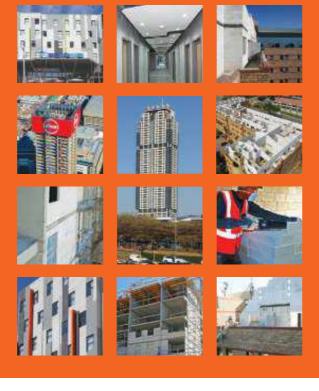
Nutec fibre-cement high performance properties and added benefits include: the use of safe renewable fibres; considerable tensile strength with enhanced dynamic load bearing properties; excellent thermal properties; water-and wind resistance; hail resistance; fire resistance and resistance to fungus, rodents and



Everite Building Products, is an appointed licensee by the Xella Group to manufacturer Hebel Autoclaved Aerated Concrete (AAC). Everite Building Products is the only manufacturer of AAC in Africa.

AAC as a building material has gained a considerable share of the international construction market since its inception in 1923 in Sweden and today maintains its reputation of the building material of the future. It is viewed as a revolutionary material that offers a unique combination of strength, light-weight, thermal insulation, sound absorption, unsurpassed fire resistance and unprecedented ease of construction.

Since commissioning the AAC plant in 2017, Everite Building Products has enjoyed considerable success in specification of the product to landmark projects in South Africa.



### **Project Based Economy**



In an ideal world, a project economy is where people are empowered to have the skills and capabilities needed to turn ideas into a reality. It's a phenomenon where organizations deliver tremendous value to exceed stakeholders' expectations through successful completion of projects. Yet, research shows that only 35 % of projects undertaken worldwide are successful. This means that huge amounts of time, money, resources and opportunities are being wasted.

Slowly but surely, projects have been dominating workplaces as a business-critical driver for innovation, growth and success. To some extent, the rise of the project economy means the end of job descriptions. The Project Management Institute (PMI) forecasted that the value of project-oriented activities worldwide would be at USD 20 trillion by 2027 – generating countless jobs for 88 million people. Even more interesting, these estimates were made before countries started spending on pandemic recovery projects, which means that the project economy is here to

stay with a promise of significant value to the economy and society.

To take advantage of this unique situation and ensure that projects do not fail, organizations need to adopt a purpose-driven approach that will enable them to reach their goals in a constantly evolving business horizon. It's high time for companies and leaders to break out of oldfashioned ways and lean into an agile working style.

### Begin with the end in mind

Managing projects goes beyond setting a target, defining the scope, meeting deadlines and deciding the budget. Projects give work meaning and can be particularly inspiring for team members affording everyone a sense of purpose instead of having them just show up or do the bare minimum at work. A study by Deloitte reports that purpose-led companies have a 40 % higher level of employee retention. When people feel engaged at work, it keeps them motivated and











gives them a broader perspective that their projects can be beyond just making money.

However, projects still fail at an astounding rate and it's not hard to understand why. Projects are customized by series of teams working through uncertainties. Even managers can fail to anticipate everything, especially during these challenging times. Thus, effective project management, as well as having the proper structure, skills and tools to achieve it, is fundamental to an organization's success.

#### Less is more

Since project, programme and portfolio management is a growing field and discipline, it needs to be carefully planned, directed and aligned with an organization's strategic goals. Leaders and key players need to be familiar with the full spectrum of project management philosophies and techniques. This can mean having smaller teams, fewer methodologies, lesser tools and simpler projects. This business discipline, when done right, helps organizations:

Get maximum returns by using minimum resources

Reduce costs

Increase productivity of employees or team members

Achieve customer satisfaction

In the current landscape where competition is tough, a business can only succeed if it adopts innovation and creativity, and effective project management ensures both these things. It helps organizations complete work systematically as everything is done in a proper sequence, from setting goals and objectives to implementing the right strategies to achieve them. The recently updated ISO 21503 and ISO 21504, two standards that help advance the governance and management of projects, will guide organizations towards greater efficiency and better outcomes.

A programme is a group of projects that are similar or related to one another, and which are often managed and coordinated as a group instead of independently. ISO 21503 provides guidance on concepts, prerequisites and practices of programme management that are important for, and have an impact on, its performance.

Effective project management is fundamental to an organization's success.

On the other hand, a portfolio is a group of different programmes within the same organization. ISO 21504 gives guidance on the principles of project and programme portfolio management. Typically, management of a project and programme portfolio supports the organizational strategies to deliver value.

The main purpose for the standards' revision was to harmonize the terms and their definitions, figures and text with the ISO 21500 series of standards devoted to effective project, programme and portfolio management.

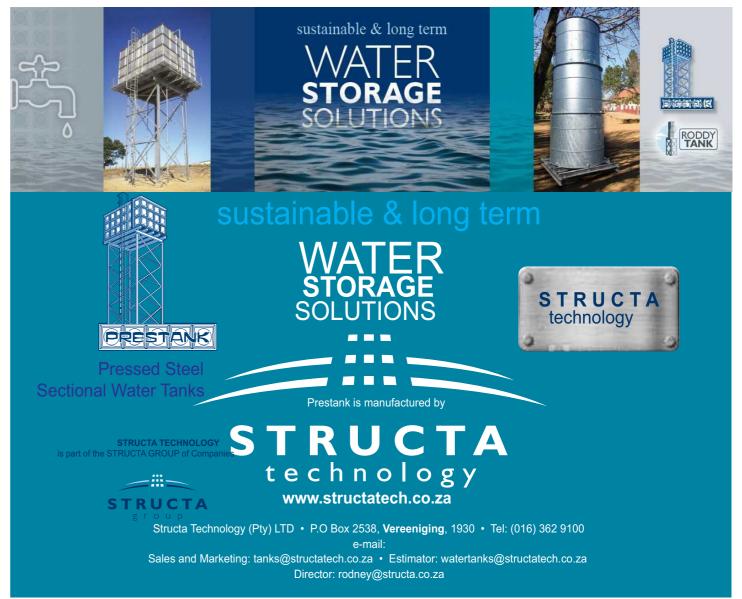
### Looking ahead

With the advent of new technologies and leadership paradigms, the project management landscape is changing rapidly with the latest emerging trends. Its beauty lies in its agile nature to meet the evolving needs of the workplace every single day.

An organization can go through dozens, even hundreds, of organizational changes ranging from

small adjustments of internal processes to total overhauls of a company's structures and strategies. Latest trends like relying on digital platforms for remote work and deploying artificial intelligence and data analytics pose new challenges to the workforce. Increased adoption of projects and its methodologies allows organizations increased flexibility and can make it easier for them to embrace these substantial changes.

A dramatic shift has taken place in our workplaces, and it looks like projects are here to stay. We're facing these kinds of evolution at work because the nature of the work itself demands it. Gone are the days where workplaces are dominated by operational and repetitive work. We are now living in a constantly changing environment with massive creation of projects. Now more than ever, having successful projects is just as important as having them in the first place — it's crucial that we do it right.









## SADCON

We are a construction company, established

With 12 years of experience, we have worked on many different projects such as, The Cape Good Hope Castle, Chelsea on Main, University of the Western Cape Life Science building, 32 on Kloof, Obs Court, just to name a few.

We offer services such as plastering, painting, building constructions, housing constructions, ceiling and partitioning, as well as renovation and maintenance services.

> office@sadcon.co.za 073 766 337 / 0606 522 513







## New Parliament building almost

ready

New MPs will wait for at least two months to use the Sh8 billion office block, the Parliamentary Service Commission (PSC) has said.

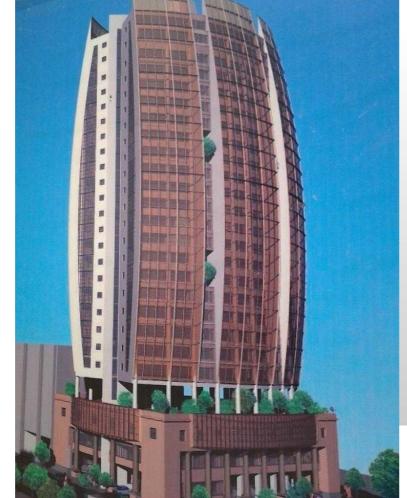
Contractors are working on the final touches on the 28-storey office block that has 26 committee meeting rooms.

Its interior fittings have been completed and subcontractors are testing the systems ahead of the allocation of offices to the 416 members of the bicameral Parliament.

"The new MPs will occupy the new office block in one or two months time. We are testing boilers and other systems to ensure all is well before lawmakers are allocated offices," Justin Muturi said as he exited office as the Speaker of the National Assembly and chairperson of PSC.

"MPs will have sufficient committee rooms fitted with state-of-the-art equipment to facilitate their work. We have set aside 26 committee rooms," Mr Muturi said, adding the initial design was to host 11 committee meeting rooms.

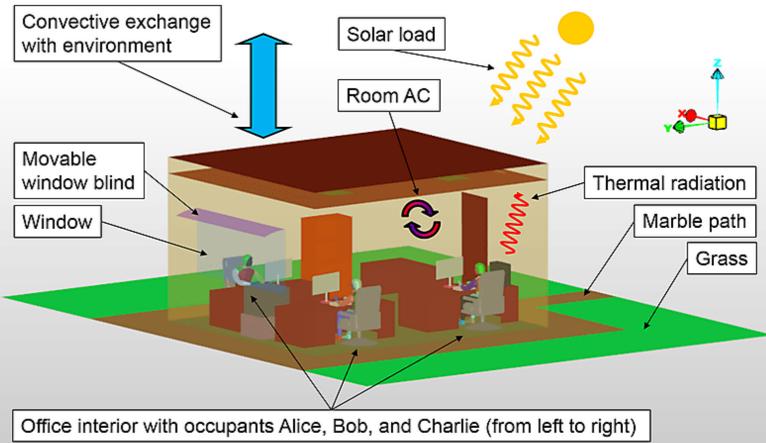
The new building will also have rooms to host



political party caucuses on parliamentary issues including Bills, he said.



## Build for comfort in hot regions



One of the advantages of living in a tropical country like Kenya is that the weather is mostly warm all year round. However, some parts of the country experience extreme hot weather, and if this is not put into consideration when one is building their own home, they may end up being uncomfortable in their own space.

The sun is the biggest source of natural lighting. While building your home in a hot area, structure it such that it allows light to come in, but keeps out the heat. "The most important element is to align the orientation of the building with the direction of the rising and setting of the sun. The sun rises in the East and sets in the West, and once you have determined this, you design your house such that the big windows face North and South," says Joe Mugo, an architect based in Mombasa.

The hot areas in Kenya are the Coast, North Eastern, Nyanza and parts of Eastern and Rift Valley. The most common method used to cool houses built in such areas is the cross-ventilation. "Cross-ventilation is the placement of windows in

the opposite direction, so that when wind comes in through one, it directly goes out through the other, allowing for full circulation of air," says Fredrick Muchiri, an interior designer.

Another alternative is to use sun shading, most of which are made of aluminum. The shiny finish of the aluminum reflects back some of the sun's rays, reducing significantly the amount of heat coming into the house.

Architect Mugo explains that though it is not often put into consideration, the distance from the floor to the ceiling when building a house in a hot area, should be slightly higher than the standard height, with ventilation at the top.

"The standard height of the ceiling from the floor is 2.5 metres. But for this type of house, it should measure at least 2.8 metres from the floor. This is because hot air rises, and to enhance airflow, it needs to be allowed to leave the room as cool air comes in. That is why there is ventilation at the top," adds Mugo.

Use of colours



Does painting the exterior of the house white help in reducing the heat in the house? "Not necessarily. How cool a house is depends on the structural placements that were considered during the planning stage," Mugo points out.

On the other hand, the choice of colours used in the interior of the house will either give the cooling effect desired, or contribute to the feeling of being hot.

"Cool colours give the psychological feeling that the house is cool. Therefore, one can choose to paint their house with a combination they like," , says Muchiri.

You may have taken shelter from the scorching sun or from the rain, right under a



window but outside a building. This is a roof over-hung, which architects use to reduce the amount of heat coming into the house without keeping out the light. The further away it is from the roof, the cooler the house becomes.

Finishing choices



Muchiri says there are some home finishing and furnishing one can use that will complement the efforts laid down by the architect. "You can use tiles, as they are known to be cold. Weather strips at the bottom of the door are equally important to stop the entry of hot air from the space at the bottom," adds Muchiri.

He notes that heavy drapes can be used to cool the house. But in doing so, he warns, be sure to have big windows that can still let in light. Fredrick also says that not only does planting trees and flowers add aesthetic value to the overall look of the home, but it also acts as a shield from direct rays of the sun

"You will find that the room whose side of the wall is close to the trees is cooler than the rest of the house. Therefore, it is advisable to plant trees all round the house, wherever possible," Muchiri points out.

Technology has also brought new ways of keeping the heat out of buildings — both residential and

commercial. Currently, there is low emissivity glass that allows light to come in but keeps the heat out. They have reflectors, and are usually coloured blue or green (like the I&M Bank building in Nairobi) with anti-glare mechanism. One can also do double-glazing or triple glazing of the windows.

"This means that while installing windows, you put space in between them to act as insulators. You can put two air spaces or one," says Mugo.

### **Furnishing**

He further points out that the type of furniture used also matters. "For instance, people like furnishing their houses with leather seats, but this can be uncomfortable to sit on especially when you are in a hot area. Instead, choose seats draped in soft fabrics, or furniture that is organic like bamboo, or hardwood made with perforations. This will be more comfortable, and will allow for free flow of air compared to the leather seats,"

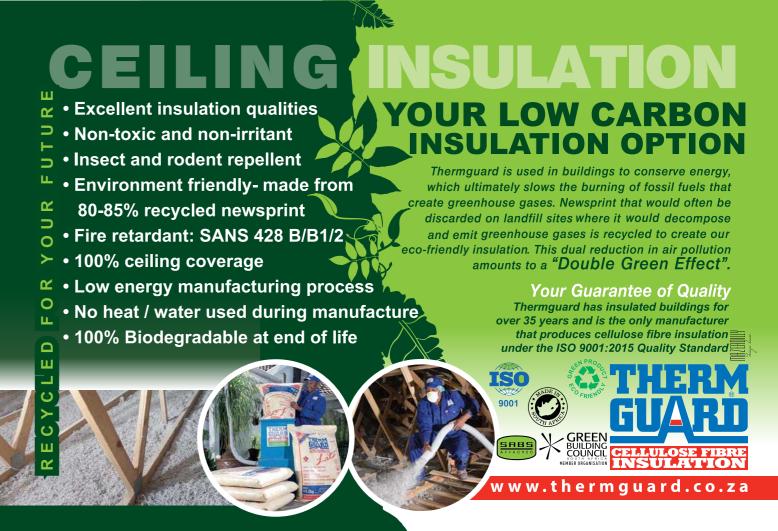
Muchiri points out.

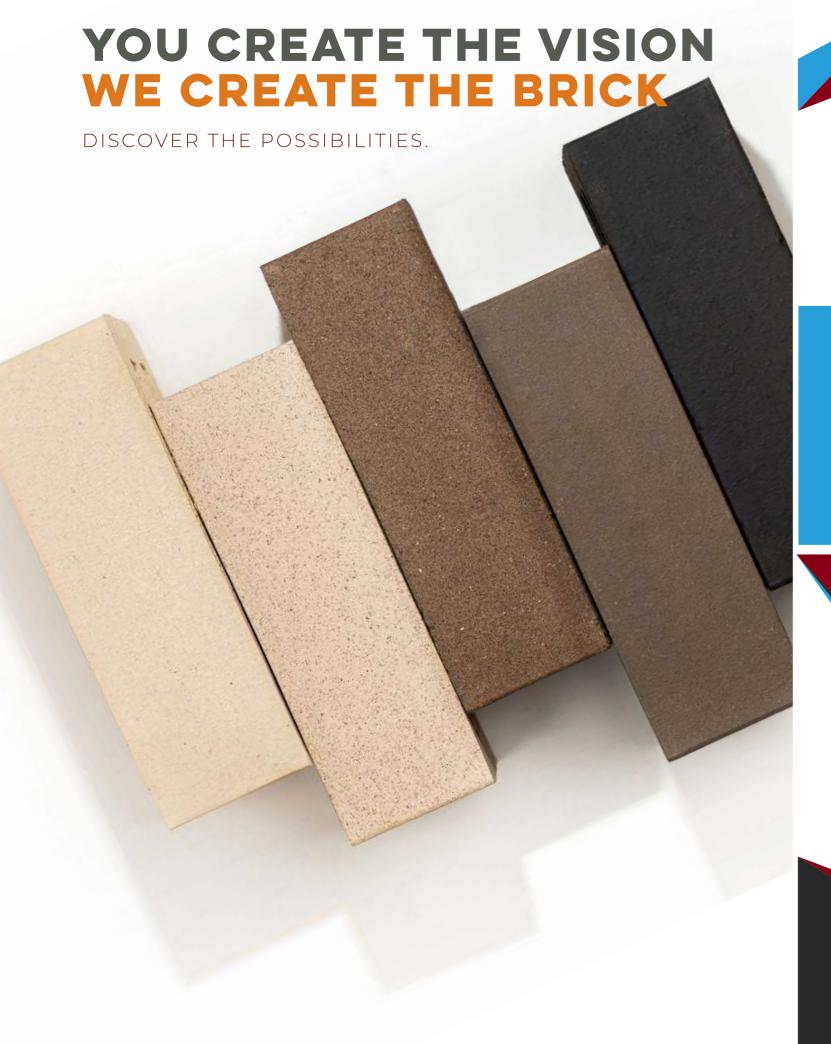
He further advises homeowners in such regions to use low heat emitting sources, being careful not to use that which attracts insects at the same time.

Mugo warns that although it is common practice on the coastal province to use coral stones to build houses, they are not necessarily the best material as far as heat regulation is concerned.

"The nature of the coral stones is such that during the day, they absorb heat slowly, therefore, the house is cool at that time. But at night, they start emitting the heat they absorbed, making the house uncomfortable," says Mugo.

He further notes that even though it is advisable to have large windows, it is also important to have a wind controlling mechanism, to allow the occupants control the amount the of wind that comes into the house.









P.O. Box 664 00606 Sarit Centre,

Nairobi, Kenya.

Tel: +254 02044 51 422/44 53 089

Telefax :44 51 423

Mobile: +254 722 861 473 / +254 733 850 848

Wireless: +254020528 77 29

Email: info@sandpconsult.co.ke, syldon@sandpconsult.co.ke

### **S&P Departments:**

Syldon and Partners is a wholly Kenya owned limited liability firm established in May, 2000 in Kenya to undertake consultancy services in design, installation and maintenance of Electrical, Mechanical Services and Management Information Systems (MIS), Civil and Structural works.

There are two directors, Eng. G.N. Olando – Managing Director in charge of all Electrical Services and general management of the firm. Eng. Calleb Olali is Director in-charge of mechanical services. Other core staff members include Assistant Electrical Engineer John Ruddy Munda and Assistant Mechanical Engineer Felix Ollando.

Eng. H.S Roopra, Eng. Peter Chege are associates of the firm and backstops Eng. Olando and Eng. Olali in all electrical and mechanical assignments respectively. Eng. Victor Ongewa and Eng. Cyrus Njungu are associates in-charge of power sub-stations and transmission/distribution lines respectively.







O ffUpper Hill Road, Upper Hill, Near Citi Bank Opposite Church of Jesus Christ Of Later Day Saints, Mount Meru Court, Suite No. 4.

### Northlands City



Among the ongoing mega projects in Kenya, the Kenyatta family is undertaking an ambitious real estate project that will result in an 11,000-acre mixed-use estate comprising residential, industrial, and commercial units hosting about 250,000 people.

Dubbed Northlands City, the development that is estimated to cost Sh500 billion, will occupy an 11,576-parcel of land in Ruiru – about 15km from the Nairobi city centre.

The land, which is traversed by the Eastern Bypass, is owned by the Kenyatta Family and is currently occupied by its dairy processor Brookside, and Gicheha Farm – the family's livestock rearing business.

Northlands City Master Plan According to the Northlands City's master plan, some 3,570 acres have been earmarked for housing — with 3,134 acres set aside for low density housing, 306 acres for high density housing, and 130 acres for medium density residential housing. The low density housing segment will have 601 villas and 1,320 town houses while the medium density area is reserved for 670 townhouses and 368 housing units in blocks of flats.

A total of 6,980 units on blocs of flats and some 3,100 townhouses have been planned for the high density residential housing area.

The master plan further shows that 390 acres have been set aside for a business district, including some 33 acres that are earmarked for a shopping mall or hotel and two acres for a clubhouse.

Northlands Industrial Park
Some 695 acres have been set aside for
construction of an industrial park. Out of this, 650
acres have been earmarked for a logistics park,
with the remaining acreage going to Brookside
Dairies.

An earlier progress report indicated that the land reserved for industries had gone on sale at Sh40



million per acre following the injection of funds from the developer for infrastructure development.

According to Impact – a subsidiary of warehouse builder Improvon (SA) – and growth markets investor Actis, construction works that commenced in October 2018 will see the plots connected to roads, water, sewer, electricity, and the Internet.

The entire acreage has already been secured with a perimeter wall.

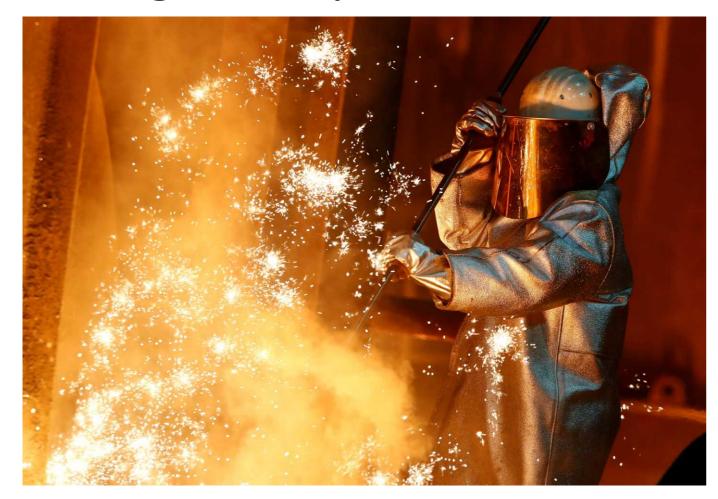
A detailed map of Northland City shows that 1,697 acres have been set aside for an open recreational space, including some 266 acres earmarked for water features.



The biggest chunk of the land — 5,156 acres — has been set aside for wildlife conservation and agriculture with Gicheha Farm as the main occupant.

The Northlands City master plan will be executed in four phases over a span of 50 years.

# Safety, driven by the principle of zero harm, lies at the core of the mining industry.



Technology, and the innovation that drives it, offers enormous benefits to the mining industry in the way it can be leveraged to improve safety across the sector.

This encompasses everything from safety training to solutions for on-the-job safety, and even includes using technology to help in handling the risks involved in the post-mining closure phase.

Leveraging technology

The latest technological advances in training, in the form of virtual reality (VR), are being introduced locally by KBC Health & Safety. Innovation manager Natalie Pitout explains that using VR allows learners to experience a simulated version of real-life dangerous scenarios. In this way, they can safely learn to mitigate the associated risks.

"The benefit of simulation is that it is not a real-life situation where a possible fatality could result. Instead, any wrong actions can be addressed safely and proactively," says Pitout. She adds that VR is not a standalone competency module, but is being introduced as part of a blended learning approach.

Blended learning means there is a theoretical component designed to impart the necessary



knowledge, which learners are then assessed on, followed by a virtual reality experiential component by means of headset goggles.

"A major benefit of virtual reality is that we can put people from different industries together in one room with the same virtual setting," she says. "For example, coal and platinum miners can be engaged together to identify common hazards in their respective segments, and we can actually see how different workers react in different situations."

By introducing analytics on the back end, she says, it becomes possible to identify if people are making the same mistakes, or whether they are identifying similar risks.

"If people are seen to be making the same mistakes, the hazards or risks can be identified for clients, and an appropriate virtual reality simulation suggested to remedy that problem."

Wearable solutions

When it comes to the safety of mine workers, says Thando Sibindi, managing executive for Mining, Manufacturing and Utilities at Vodacom Business, the company has developed smart technology known as the "connected worker". This involves a smart device based on narrow band technology, which doesn't draw a lot of power and can provide longer battery life.

"This device can be worn on the wrist or on

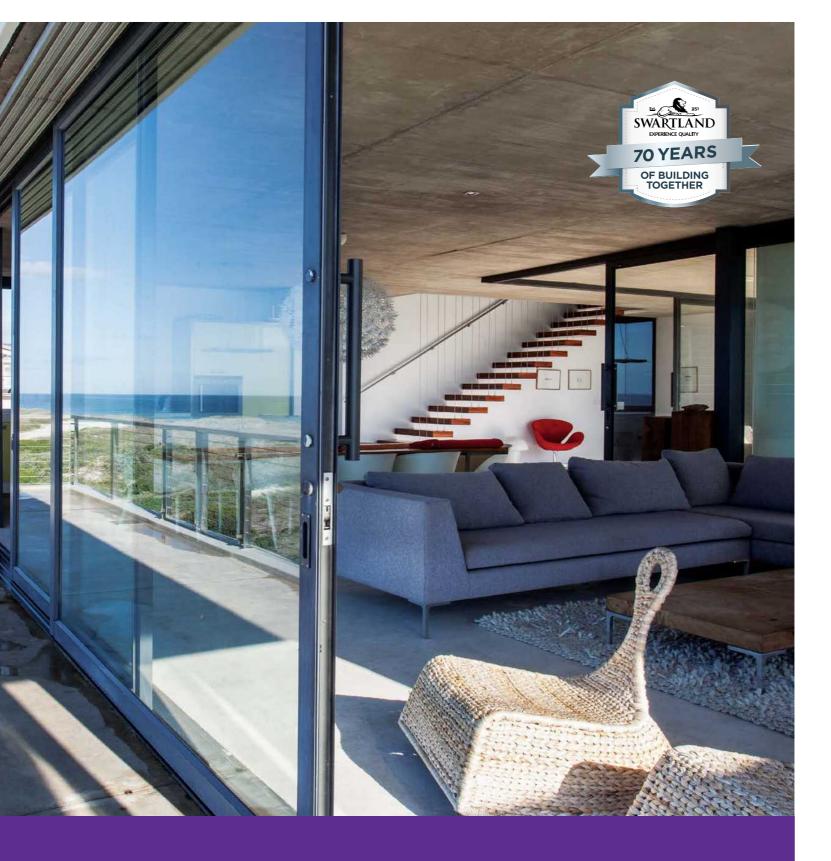


their workwear, and as the employee moves around the mine, it sends back real-time information on what is going on in their environment. This allows for reactions in real time.

"For example, if they enter a geo-fenced area they are not supposed to be in, the device will instantly alert them to that fact. At the same time, of course, the operations centre undertaking the monitoring is also able to track that they are in a hazardous zone," he says.

"The beauty of technology like this is that it not only improves safety, but also boosts efficiencies. For example, we have installed mobile private networks delivering high connectivity and low latency, to enhance the operation of these devices, which has the added benefit of improving communications too. Naturally, workers may be concerned that such monitoring is intrusive, but this simply requires worker education so they understand that this is for their safety."

"The use of motion detection, cameras and IoT sensors allows the customer to monitor the site, check for movement in certain classified zones, and even grant access rights to relevant individuals – via facial recognition technology – during the decommissioning phase.



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### Kenya's 1st TOD Housing Project -Embakasi



Tat the onset of the year, the government signed a deal with a private developer for the establishment of the country's first transit-oriented development (TOD) project in Nairobi as part of a strategy to promote the use of rail transport over public and private vehicles.

Under the deal, Seascan Development Limited will establish an affordable housing complex at Mowlem Ward, Embakasi West, which will be linked to the Dandora Commuter Rail Station to give residents a hassle-free access to rail transport.

The 4,900-unit development is expected to cost Sh18 billion.

According to Housing Principal Secretary Charles Hinga, the project will be completed in three phases – with phase one set to begin in April.

A total of 1,200 units will be built in phase one,

2,000 units in phase two, while the remaining 1,700 units will be accomplished in phase three

Jia Yangping and Charles Hinga Jia Yangping and Charles Hinga sign MoU for the Mowlem project on Jan 19, 2022. PHOTO | STAR/MERCY MUMO

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"This development is of great interest to us because it will be the first of what we call transitoriented development in Kenya," Mr Hinga said during the signing of the deal on Jan 19.

### High-density estates

TODs, which are quite popular in China, are highdensity estates that are closely integrated with mass transit systems to promote the use of public transport.

They are strategically located to allow easy access to public transport hubs.

"The TOD model helps unlock the potential of cities and saves energy while still benefiting

residents," says Bryant Lu, Vice Chairman of Ronald Lu & Partners' - a Hong Kong-based architectural firm with more than 60 TOD projects across China.

Kenya hopes to use the Mowlem project as the launchpad for similar schemes in Nairobi to expose citizens to affordable houses and easy access to rail transport.

### Social amenities

Fidel Gondi, the director of Seascan Development said the design of the Mowlem project will allow buyers to live, work and play within the development.

"We will also provide social amenities within the compound that will allow people to live comfortably and still be able to enjoy with their families," Mr Gondi said.

Initial details show that a studio unit (880 in total) will be sold for Sh1.8 million, while a one-bedroom unit (660) will be going for Sh3 million.

A two-bedroom unit (1,680) will be sold at Sh3.7 million, while a three-bedroom unit (1,680) will go for Sh5.4 billion.



The expanded polystyrene (EPS) technology involves construction of houses by assembling ready-made EPS foam, sandwiched between a galvanished steel wire mesh that is plastered on both sides with concrete







Prefabricated homes, often referred to as prefab homes or simply prefab, are specialist dwelling types of prefabricated building, whiuch are manufactured off-site in advance, usually in standard sections that can be easily shipped and aasembled. CUMA Regrigeration EA. Ltd Houyse are ideal for;

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